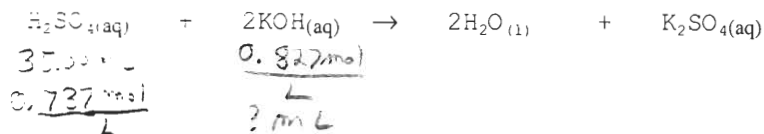


SHOW ALL WORK FOR CREDIT

Atomic Masses: Na 22.99, P 30.97, C 12.01, O 16.00, H 1.008, S 32.07, As 74.92

- (5) 1. In a titration of 35.00 mL of 0.737 M H_2SO_4 , _____ mL of a 0.827 M KOH solution is required for neutralization.



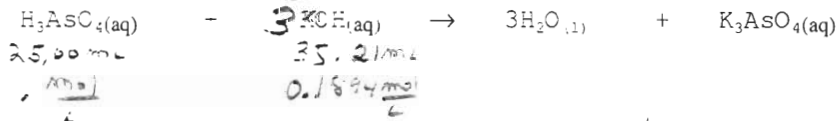
$$\frac{35 \text{ mL} \times 0.737 \text{ mol/L}}{1000 \text{ mL}} \times \frac{2 \text{ mol KOH}}{1 \text{ mol H}_2\text{SO}_4} \times \frac{1000 \text{ mL KOH}}{0.827 \text{ mol KOH}} = 62.38 \text{ mL KOH}$$

62.4

- (5) 2. What is the concentration (M) of sodium ions in 4.57 L of a 0.847 M Na_3P solution?

$$\frac{0.847 \text{ mol Na}_3\text{P}}{1} \times \frac{3 \text{ mol Na}^+}{1 \text{ mol Na}_3\text{P}} = 2.54 \text{ M Na}^+$$

- (5) 3. Calculate the concentration (M) of arsenic acid (H_3AsO_4) in a solution if 25.00 mL of that solution required 35.21 mL of 0.1894 M KOH for neutralization.



(0.2668 M without using the 3)

$$\frac{25.00 \times 10^{-3} \text{ L} \times 0.1894 \text{ mol/L}}{35.21 \times 10^{-3} \text{ L} \times 0.1894 \text{ mol/L}} \times \frac{1 \text{ mol H}_3\text{AsO}_4}{3 \text{ mol KOH}} = 0.08892 \text{ M H}_3\text{AsO}_4$$

- (5) 4. What is the concentration (M) of CH_3OH in a solution prepared by dissolving 11.7 g of CH_3OH in sufficient water to give 230 mL of solution?

$$\frac{11.7 \text{ g CH}_3\text{OH}}{32.042 \text{ g/mol}} \times \frac{1 \text{ mol}}{230 \times 10^{-3} \text{ L}} = 1.588 \text{ M CH}_3\text{OH}$$

1.59

5. (4Pts) Complete and balance each of the following:

